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(2) That use of a category A antenna will remedy the interference thus allowing the project to be realized.

(c) As an exception to the provisions of this section, the FCC may approve requests for use of periscope antenna systems where a persuasive showing is made that no frequency conflicts exist in the area of proposed use. Such approvals shall be conditioned to a standard antenna as required in paragraph (a) of this section when an applicant of a new TV auxiliary broadcast or Cable Television Relay station indicates that the use of the existing antenna system will cause interference and the use of a category A or B antenna will remedy the interference.

(d) As a further exception to the provision of paragraph (a) of this section, the Commission may approve antenna systems not conforming to the technical standards where a persuasive showing is made that:

(1) Indicates in detail why an antenna system complying with the requirements of paragraph (a) of this section cannot be installed, and

(2) Includes a statement indicating that frequency coordination as required in § 74.604 (a) was accomplished.

[45 FR 78693, Nov. 26, 1980, as amended at 49 FR 7131, Feb. 27, 1984; 49 FR 37778, Sept. 26, 1984; 50 FR 7342, Feb. 22, 1985; 51 FR 19840, June 3, 1986; 52 FR 7143, Mar. 9, 1987; 55 FR 11587, Mar. 29, 1990; 56 FR 50663, Oct. 8, 1991; 62 FR 4922, Feb. 3, 1997; 68 FR 12771, Mar. 17, 2003]

§ 74.643 Interference to geostationary-satellites.

Applicants and licensees must comply with § 101.145 of this chapter to minimize the potential of interference to geostationary-satellites.

[68 FR 12771, Mar. 17, 2003]

§ 74.644 Minimum path lengths for fixed links.

(a) The distance between end points of a fixed link must equal or exceed the value set forth in the table below or the EIRP must be reduced in accordance with the equation set forth below.

| Frequency band (MHz) | Minimum path length (km) |
|-------------------------|-----------------------------------|
| Below 1,990 | n/a |

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| Frequency band (MHz) | Minimum path length (km) |
|-------------------------|-----------------------------------|
| 1,990–7,125 | 17 |
| 12,200–13,250 | 5 |
| Above 17,700 | n/a |

(b) For paths shorter than those specified in the Table, the EIRP shall not exceed the value derived from the following equation.

$$\text{EIRP} = \text{MAXEIRP} - 40 \log(\text{A/B}) \text{ dBW}$$

Where:

EIRP = The new maximum EIRP (equivalent isotropically radiated power) in dBW.

MAXEIRP = Maximum EIRP as set forth in the Table in § 74.636 of this part.

A = Minimum path length from the Table above for the frequency band in kilometers.

B = The actual path length in kilometers.

NOTE 1 TO PARAGRAPH (b): For transmitters using Automatic Transmitter Power Control, EIRP corresponds to the maximum transmitter power available, not the coordinated transmit power or the nominal transmit power.

NOTE 2 TO PARAGRAPH (b): Stations licensed based on an application filed before April 16, 2003, in the 2450–2483.5 MHz band, for EIRP values exceeding those specified above, may continue to operate indefinitely in accordance with the terms of their current authorizations, subject to periodic renewal.

(c) Upon an appropriate technical showing, applicants and licensees unable to meet the minimum path length requirement may be granted an exception to these requirements.

NOTE: Links authorized prior to April 1, 1987, are excluded from this requirement, except that, effective April 1, 1992, the Commission will require compliance with the criteria where an existing link would otherwise preclude establishment of a new link.

[52 FR 7143, Mar. 9, 1987, as amended at 68 FR 12771, Mar. 17, 2003]

§ 74.651 Equipment changes.

(a) Modifications may be made to an existing authorization in accordance with §§ 1.929 and 1.947 of this chapter.

(b) Multiplexing equipment may be installed on any licensed TV broadcast STL, TV relay or translator relay station without authority from the Commission.

(c) Permissible changes in equipment operating in the bands 18.3–18.58 GHz

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and 19.26–19.3 GHz. Notwithstanding other provisions of this section, licensees of stations that remain co-primary under the provisions of § 74.602(g) may not make modifications to their systems that increase interference to satellite earth stations, or result in a facility that would be more costly to relocate.

[28 FR 13718, Dec. 14, 1963, as amended at 38 FR 6827, Mar. 13, 1973; 47 FR 55938, Dec. 14, 1982; 49 FR 7131, Feb. 27, 1984; 58 FR 19776, Apr. 16, 1993; 61 FR 4368, Feb. 6, 1996; 63 FR 36605, July 7, 1998; 65 FR 54173, Sept. 7, 2000; 68 FR 12771, Mar. 17, 2003; 68 FR 16967, Apr. 8, 2003]

§ 74.655 Authorization of equipment.

(a) Except as provided in paragraph (b) of this section, all transmitting equipment first marketed for use under this subpart or placed into service after October 1, 1981, must be authorized under the certification or verification procedure, as detailed in paragraph (f) of this section. Equipment which is used at a station licensed prior to October 1, 1985, which has not been authorized as detailed in paragraph (f) of this section, may continue to be used by the licensee or its successors or assignees, provided that if operation of such equipment causes harmful interference due to its failure to comply with the technical standards set forth in this subpart, the FCC may, at its discretion, require the licensee to take such corrective action as is necessary to eliminate the interference. However, such equipment may not be further marketed or reused under part 74 after October 1, 1985.

(b) Certification or verification is not required for transmitters used in conjunction with TV pickup stations operating with a peak output power not greater than 250 mW. Pickup stations operating in excess of 250 mW licensed pursuant to applications accepted for filing prior to October 1, 1980 may continue operation subject to periodic renewal. If operation of such equipment causes harmful interference the FCC may, at its discretion, require the licensee to take such corrective action as is necessary to eliminate the interference.

(c) The license of a TV auxiliary station may replace transmitting equip-

ment with authorized equipment, as detailed under paragraph (f) of this section, without prior FCC approval, provided the proposed changes will not depart from any of the terms of the station or system authorization or the Commission's technical rules governing this service, and also provided that any changes made to authorized transmitting equipment is in compliance with the provisions of part 2 of the FCC rules concerning modifications to authorized equipment.

(d) Any manufacturer of a transmitter to be used in this service may authorize the equipment under the certification or verification procedure, as appropriate, following the procedures set forth in subpart J of part 2 of the FCC rules.

(e) An applicant for a TV broadcast auxiliary station may also authorize an individual transmitter, as specified in paragraph (f) of this section, by following the procedures set forth in subpart J of part 2 of the FCC rules and regulations.

(f) Transmitters designed to be used exclusively for a TV STL station, a TV intercity relay station, a TV translator relay station, or a TV microwave booster station, shall be authorized under verification. All other transmitters will be authorized under the certification procedure.

[63 FR 36605, July 7, 1998, as amended at 68 FR 12772, Mar. 17, 2003]

§ 74.661 Frequency tolerance.

Stations in this service shall maintain the carrier frequency of each authorized transmitter to within the following percentage of the assigned frequency.

| Frequency band (MHz) | Frequency tolerance (%) |
|------------------------|-------------------------|
| 2,025 to 2,110 | ¹ 0.005 |
| 2,450 to 2,483.5 | ² 0.001 |
| 6,425 to 6,525 | 0.005 |
| 6,875 to 7,125 | ¹ 0.005 |
| 12,700 to 13,250 | ¹ 0.005 |
| 17,700 to 18,820 | 0.003 |
| 18,920 to 19,700 | 0.003 |

¹Television translator relay stations shall maintain a frequency tolerance of 0.002%.